

RECOGNITION OF THE CANCELLARIID GENUS *NEADMETE*
HABE, 1961, IN THE WEST AMERICAN FAUNA, WITH
DESCRIPTION OF A NEW SPECIES FROM THE LOMITA
MARL OF LOS ANGELES COUNTY, CALIFORNIA

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ABSTRACT: The genus *Neadmete* Habe, 1961, is suggested for the cool-water cancellariid species previously treated in the genus *Massyla* H. and A. Adams, 1854, and a new species, *Neadmete sutherlandi*, is described from the Late Pliocene Lomita Marl formation of San Pedro, California.

In February of 1965, Mr. Roger Reimer brought to the Los Angeles County Museum of Natural History samples of fossiliferous marl and some shells and otolith material from the San Pedro area. Excavations by Mr. John E. Fitch, Director of the California Fish and Game Laboratories, followed and yielded an unusually large number of minute otoliths and molluscan species resembling those of the hitherto single rich source of megafossils at the formation from the locality known and recorded in the literature as "Hilltop Quarry," a source that has been unavailable since 1940. Extensive excavations of these outcrops by Mr. Fitch and the Museum staff yielded a large and unique fauna with new fossil records of mollusks. The formation suggests Late Pliocene, rather than Early Pleistocene age, as has previously been accepted. Further analysis of molluscan and foraminiferal material will be required to document this conclusion. The description of a striking new species of cancellariid is presented at this time.

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Genus *Neadmete* Habe, 1961

Neadmete Habe, 1961a, App., p. 28. Type species, by original designation, *Neadmete japonica* (Smith, 1879). Recent, Japan. Habe, 1961a, p. 73, pl. 36, fig. 2; 1961b, p. 435, pl. 24, fig. 3; 1964, p. 113, fig. 2.

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Figure 1. *Naedmete sutherlandi*, new species. Holotype, LACM 1150. Long. 39.6, lat. 16.1 mm.



Figure 2. *Neadmete sutherlandi*, new species. Holotype, LACM 1150. Long. 39.6, lat. 16.1 mm.

A translation from Japanese of the original generic diagnosis of Habe follows:

Shell small, whitish; surface covered with periostracum; spire high, length of body whorl more than half of shell length; spiral sculpture fine and distinct; axial sculpture forming cancellations, which sometimes become obsolete on body whorl.

Through a misinterpretation of the type species of *Massyla* H. and A. Adams, 1854, *Massyla* has erroneously been applied to related west American species, dating from its first application by Strong in Burch (1945: 10). The type species, *Cancellaria corrugata* Hinds, 1843, has been little known until syntype material was recently figured by Keen (1966: 27, pl. 46, fig. 7). It is clear that this relatively smooth species from the Panamic province having strong columellar folds has nothing in common with the cool-water group under consideration.

Dall (1921) applied the generic name *Sveltia* Jousseaume, 1888, type species, *Voluta varicosa* Brocchi, 1814, Pliocene, Italy. The type species, as figured by Jousseaume (1888: 24, fig. 3) has prominent raised axial ribbing, with spiral incisions, two heavy columellar plaits, and strong spiral ribbing on the inner surface of the outer lip. It clearly represents a tropical group not related to the boreal forms under consideration.

Neadmete Habe thus appears to be the genus most applicable to the relatively large cool-water species in the North Pacific differing from *Admete* Möller, 1842, ex Kroyer MS, type species, *Admete crispa* Möller, 1842 (= *A. couthouyi* Jay, 1839) in having a higher spire relative to the length of the body whorl, lacking the tendency toward development of a broad columellar shield of *Admete*, having a straighter canal than *Admete*, with continuous spiral sculpture in the columellar area, that increases the number of columellar plaits.

Only two or possibly three Recent species of *Neadmete* are known from the northeastern Pacific: *N. modesta* (Carpenter, 1864) (Palmer, 1958: 224, pl. 24, figs. 17-18, holotype) and *N. circumcincta* (Dall, 1873) (p. 59, pl. 2, fig. 2). *Neadmete unalashkensis* (Dall, 1873) (p. 58, pl. 2, fig. 1) appears to be a sculptural variant of *N. modesta* having more prominent axial ribs. Both *N. modesta* and *N. circumcincta* are highly variable in shell proportions, heaviness of shell, and strength of sculpture.

***Neadmete sutherlandi*, new species**

Figures 1 and 2

Description: Shell relatively large, slender, whorls 10, spire elevated, turreted. Nucleus simple, whorls two. Approximately 16 axial ribs on early whorls, becoming obsolete on body whorl. Spiral sculpture of prominent, widely spaced ribs, superimposed on the axial ribs; 3 on each postnuclear whorl and 8 on body whorl, with single intercalary ribs between major ribs. Whorls

subcylindrical, tabulate; sutures deep; outer lip thick. Columellar area with two main plaits and 5 plicae formed by extension of primary spiral ribbing. Aperture oval; anterior canal short and deep. Dimensions (in mm.): Long. 39.6, lat. 16.1, long. of aperture 15.4 (holotype).

Type Locality: Los Angeles County Museum of Natural History, Invertebrate Paleontology locality no. 435: a fossiliferous outcrop on the east side of the canyon below the convergence of Park Western Drive, West Coralmount Drive, and Host Place, San Pedro, California. This locality probably corresponds to USGS locality no. 12222 (Woodring, Bramlette and Kew, 1946).

Age and Formation: Late Pliocene (previously reported in the literature as Early Pleistocene), Lomita marl.

Type Material: Holotype, Los Angeles County Museum of Natural History, Invertebrate Paleontology, cat. no. 1150, 3 paratypes, cat. no. 1151. Two of the paratypes are smaller specimens, having 8 to 9 whorls, and measure (in mm.), long. 19.0, lat. 18.6; long. 17.9, lat. 7.8 mm. One specimen is lacking the spire but has an aperture 20 mm. long, which enables an estimate for the total length of the shell to be approximately 50 mm., larger than the holotype.

Discussion: *Neadmete sutherlandi* attains nearly twice the size of other known species of *Neadmete*. It has sculptural features in common with both *N. modesta* and *N. circumcincta*. The whorls are not as tabulate as those of *N. modesta*, which generally has 5 major ribs exposed on the early whorls. The tabulation of *N. sutherlandi* is considerably more pronounced than that of *N. circumcincta* which has a larger number of spiral ribs of uneven strength. *Neadmete sutherlandi* resembles *N. japonica* in details of sculpture, but comparison with the illustrations of the latter given by Habe (1961a, 1961b, 1964), shows it is a much larger and more slender shell than that of *N. japonica*.

The species is named for Mr. J. Alden Sutherland, Museum Field Assistant in Paleontology, who collected the type material for the Museum.

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